

WHAT IS CLAIMED IS:

1. A color sensor for measuring light from a light source, said color sensor comprising:

5

a plurality of photodetectors;

10 a plurality of primary color filters, each primary color filter comprising a layer of material between said light source and a corresponding one of said photodetectors, each primary color filter preferentially transmitting light in a corresponding band of wavelengths about a characteristic wavelength; and

15

a first trim filter located between said light source and said photodetectors, said first trim filter comprising a layer of material that preferentially attenuates light at a first trim wavelength between two of said characteristic wavelengths.

20

2. The color sensor of Claim 1 where said first trim filter further preferentially attenuates light at a second trim wavelength, said first trim wavelength being less than one of said characteristic wavelengths and said second trim wavelength being greater than that characteristic wavelength.

3. The color sensor of Claim 1 wherein said first trim filter comprises an interference filter.

25

4. The color sensor of Claim 1 further comprising a substrate having said photodetectors located therein, said first trim filter comprising a first trim filter layer on said substrate.

30 5. The color sensor of Claim 4 wherein said color filters are located on said first trim

filter layer.

6. The color sensor of Claim 1 wherein said color filters are located between said first trim filter and said photodetectors.

7. The color sensor of Claim 1 further comprising a second trim filter, said second trim filter comprising a layer of material that preferentially attenuates light at a second wavelength that is different from each of said characteristic wavelengths and said first trim
5 wavelength.

8. The color sensor of Claim 7 wherein said color filters are located between said first and second trim filters.

10 9. A method for fabricating a color sensor, said method comprising:

providing a substrate having a plurality of photodetectors;

bonding a first trim filter layer to said substrate;

15 bonding a color filter layer to said first trim filter layer, said color filter layer comprising a plurality of primary color filters, each primary color filter comprising a layer of material between said light source and a corresponding one of said photodetectors, each primary color filter preferentially transmitting light in a corresponding band of wavelengths
20 about a characteristic wavelength,

wherein said first trim filter comprises a layer of material that preferentially attenuates light at a first trim wavelength between two of said characteristic wavelengths.

25 10. The method of Claim 9 where said first trim filter further preferentially attenuates light at a second trim wavelength, said first wavelength being less than one of said characteristic wavelengths and said second wavelength being greater than that characteristic wavelength.

30 11. The method of Claim 9 wherein said first trim filter comprises a plurality of transparent layers in which adjacent layers have different indices of refraction.

12. The method of Claim 9 further comprising bonding a second trim filter layer to said color filter layer such that said color filter layer is between said first and second trim filter layers.